INTELLECTUAL PROPERTY AND TECHNOLOGY
THE LAW OFFICES OF
MARK O. LOFTIN, P.C.

MEMBER, ALABAMA STATE BAR
REGISTERED PATENT ATTORNEY

IFW P

April 15, 2005

Do Not Enter 1/6/06 RB

APPL NO.:10/718,351 UNIT ART NO: 3749 FILING DATE: 11-21-2003 EXAMINER: ALFRED BASICHAS

INVENTION TITLE: A METHOD AND DEVICE FOR COMBUSTING LIQUID FUELS USING HYDROGEN

CONFIRM. NO.: 9879

AMENDMENTS TO THE CLAIMS

What is claimed and desired to be secured by United States Letters Patent is:

1. (currently amended) A method of combusting a liquid primary fuel comprising the steps of:

establishing a zone of ~~(combusting hydrogen)~~ combustion, spaced from a fuel nozzle, and defined by a flame of ignited hydrogen,

~~injecting a mechanically atomized stream of liquid primary fuel through the zone of combusting hydrogen such that a substantial portion of the liquid primary fuel contacts the hydrogen flame front and hot product gases, and~~

~~igniting the vaporized portion of the primary fuel by the hydrogen flame.~~

dispersing a liquid primary fuel through said nozzle into the zone of combustion in a partially vaporized and partially atomized state, and

burning the vaporized liquid primary fuel and the atomized liquid primary fuel entering said zone of combustion.

2. (currently amended) The method of claim 1 wherein the ~~hydrogen combustion zone~~ zone of combustion is established by the steps of:

providing ~~flowing~~ a pressurized source of hydrogen ~~at a controlled rate~~ through a ~~plurality~~ conduits ~~each with~~ having a discharge opening adjacent to ~~into~~ said ~~hydrogen combustion zone~~ zone of combustion,

igniting the hydrogen ~~discharging from the conduits~~ discharged through said discharge opening to produce a hydrogen flame; and

rotating the ~~conduits about a central axis to simulate a continuous zone of combusting hydrogen~~ hydrogen flame about a longitudinal axis of the zone of combustion.

2370 HILLCREST ROAD, SUITE G#317 - MOBILE, ALABAMA 36695 - TELEPHONE: (251) 634 – 1960 FAX (251) 634 – 1960